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(54) METHODS FOR DETECTING ANALYTES USING CONJUGATED POLYMERS AND THE INNER FILTER EFFECT

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(57) **ABSTRACT**

The methods disclosed utilize π-conjugated polymers (CPs) as sensors for various analytes through the inner filter effect (IFE). Further, the methods utilize CPs with controlled optical properties for targeting sensing applications and operates through a novel IFE-based method, providing sensitive and selective sensors that operate in complex environments. The methods further provide calibration standards for the identification of similar and structurally distinct target analytes, where the analyte is a small molecule, macromolecule, and/or biological organism of interest.